

In the Drawings

Please amend the drawings as set forth below. Attached is a copy of a Letter to Official Draftsman with sketches showing the requested changes marked in red. Applicants have also submitted by way of a separate letter a full set of formal drawings.

Fig. 1A

Please add the designation -- 31A -- and associated lead line.

Please change "38" to --31--.

Fig. 1C

Please add the designation -- 36 -- and associated lead line.

Fig. 3

Please delete the lower "30" and associated lead line and add the designation -- 30A -- and associated lead line designating the lower jagged edge of stack 30.

REMARKS

Applicants are no longer claiming the benefit under 35 USC §120 of Application No. 10/262,721 filed on October 2, 2002 and have amended the Specification to delete the reference to this prior application. Other amendments to the Specification have also been made to correct minor errors. Further, minor corrections have been made to the drawings and indicated by the attached copy of a Letter to Official Draftsman. Still further, Applicants have, by way of separate letter, submitted a complete set of formal drawings to replace the informal drawings filed with the subject application.

In the above-noted Office Action, Claim 1 was rejected under §112 for being indefinite and Claims 1 – 4 and 10 – 12 were rejected for being anticipated under §102(b) by USPN. 3,749,422 to Abildgaard et al. (hereinafter Abildgaard et al.). Applicants have amended Claims 1, 4, 5, 8, 10, 12 and 13 and added new Claims 14 – 17.

As described in the subject application, the present invention is directed to methods and apparatus for binding a stack of sheets which permits part of the binding sequence to be carried out using conventional “perfect bind” binding equipment as depicted schematically in Figs. 1 - 3.

Rejected Claim 1 is directed to method of binding a stack of sheets using, among other things, “exposing first and second adhesive segments.” This claim was rejected under §112 for being indefinite in that it is “unclear as to where the segments of pressure sensitive adhesive are.” Claim 1 has been amended to provide an antecedent for the adhesive segments, but the location of such segments is not specifically recited in the claim. As per the Fig. 7 embodiment, the segments 56A/B are initially disposed on the claimed elongated spine member and per the Fig. 24 embodiment, that are initially disposed on the end leafs. In Claim 1 the only

intended limitation as to the original location is that the adhesive segments must be disposed so that the two "attaching" steps can be carried out. It is submitted that this is all that §112 requires and that amended Claim 1 complies with that section.

With respect to the rejection of Claim 1 as being anticipated in view of Abildgaard et al, reference was made in the rejection to the Fig. 4 embodiment and the use of the "perfect binding" method as noted at col. 5, lines 13 – 18. This rejection is respectfully traversed. As described in the subject application, a "perfect bind" type binding machine first functions to mill the edge of a stack of sheets to be bound as shown in Fig. 1A of the application. Next, a molten hot melt adhesive 34 is applied to the milled edge as shown in Fig. 1B by the binding machine. A flexible paper cover 36 is then wrapped around the edge of the stack by the machine, with the hot melt adhesive both functioning to bind the sheets of the stack 30 together and to secure the stack to the cover 36 in the spine region.

Among other things, the method of Claim 1 includes "applying molten hot melt adhesive to the edge of the stack and to the first and second end leafs", with "each end leaf including first and second sheets separated by a fold".

The Fig. 4 embodiment of Abildgaard et al does not use a hot melt adhesive, but rather plastic spine connecting members 26, 27 and 29 that rely on holes being drilled in the elements to be bound. Fig. 8 shows a conventional cover 76/77 which is wrapped around the edge of the stack of sheets and glued to the edge of the stack apparently using "perfect binding" technology. The outer portions of the cover, portions 76, will become attached to the inner side of the hardcover by a layer 64f of pressure sensitive adhesive. Thus, the outer portions 76 of the cover apparently function as the respective end leafs. The end leafs of Fig. 8 of Abildgaard et al are thus each a single sheet and clearly differ from the pair of end leafs recited in Claim 1, each of which includes "first and second sheet segments separated by a fold".

The method of amended Claim 1 differs from the Fig. 8 embodiment of Abildgaard et al in several other important respects. By way of example, Claim 1 recites that "subsequent to securing ... of the elongated spine member to the edge

of the stack by way of hot melt adhesive", there are two further steps of "attaching" the spine member to the end leafs. In the case of the Fig. 8 embodiment, once the "end leafs" (outer portions 76) are secured by the hot melt adhesive, no further steps of "attaching" the end leafs to the spine member or anything like the spine member are carried out.

Figs. 8A/B of Abildgaard et al show an alternative arrangement, again apparently utilizing "perfect bind" technology. Again, a cover 76g is applied to the stack using "perfect bind" technology. A pair of single sheet end leafs 23g are secured to the respective sides of the cover 76g by way of respective layers 101 of pressure sensitive adhesive 101. The end leafs 23g will then each be attached to the inner surface of the hardcover or case by way of respective layers 64g of pressure sensitive adhesive. As is the case of the Fig. 8 embodiment, the Fig. 8A/B embodiments of Abildgaard et al utilize end leafs which are not the claimed end leafs including "first and second sheet segments separated by a fold".

Again, the method of Claim 1 differs in several other respects from the Fig. 8A/B embodiments. Amended Claim 1 recites the step of "applying molten hot melt adhesive to the edge of the stack and to the first and second end leafs". It can be seen from Fig. 8A, none of the hot melt adhesive 78g is applied to the "end leafs" 23G.

In view of the foregoing, it is believed that amended Claim 1 is patentable over Abildgaard et al, either taken alone or in combination with the other cited prior art. Claims 2 – 9 depend, either directly or indirectly, from allowable Claim 1 and add patentably significant limitations to the claim. Thus, these claims are also believed to be patentable.

Claim 10 was also rejected for being anticipated by Abildgaard et al. This rejection is respectfully traversed. Claim 10 is directed to a novel binding apparatus for using in a conventional cover which functions to wrap the binding apparatus around the stack of sheets during binding. The binding apparatus includes a elongated spine member, a pair of pressure sensitive adhesive segments and a pair of release liners arranged as claimed. Claim 10 has been amended to recite that the

elongated spine member and the first and second release liners of the binding apparatus contact the pressure sensitive adhesive segments and are thus secured together by the segments so that the apparatus forms a single unit which can be utilized by a "perfect bind" binding machine. Further, Claim 10 has been amended to recite that "the elongated spine member and the release liners are fabricated from materials such that the apparatus can be made substantially flat prior to binding and can be wrapped around the stack of sheets during binding". This latter feature clarifies that the claimed binding apparatus can lay flat as does a conventional cover used in perfect binding and can be wrapped around the stack as does a conventional cover used in perfect binding.

In rejecting original Claim 10, the Examiner referenced Fig. 4 of Abildgaard et al together with a spine strip 48 and a pair of pressure sensitive adhesive strips and release liners, presumably as shown in Fig. 2. It can be seen that the adhesive strips, presumably strips 36, do not contact the spine strip 48 and thus do not function to secure the spine strip 48 to anything, much less a pair of release liners. It also does not appear that the arrangement cited by the Examiner is capable of being laid flat for use in a perfect bind type machine or being wrapped around an edge of the stack by the machine.

For the foregoing reasons, it is submitted that Claim 10 is patentable over Abildgaard et al, either taken alone or in combination with the other cited prior art. Claim 11 depends directly from allowable Claim 10 and adds patentably significant limitations to the claim therefore Claim 11 is believed to be allowable for that reason alone.

Claim 12 is directed to an apparatus for use in binding a stack of sheets which includes an end leaf which includes first and second sheet segments separated by a fold, together with a spacer member, a segment of pressure sensitive adhesive and a release liner arranged as recited in the claim. In rejecting Claim 12 for being anticipated by Abildgaard et al, reference was made to end leaf 23 and a "spacer member attached to end leaf 23 proximate to fold (59) and a release liner disposed

over the segment of pressure sensitive adhesive (Col. 1, lines 19-24f)". This rejection is respectfully traversed.

Claim 12 recites, among other things, that the end leaf includes a "first and second sheet segments separated by a fold, with each sheet segment having dimensions that generally correspond to dimensions of the sheets of the stack". Claim 12 has been amended to emphasize that the segments "are formed from a single folded sheet". End leaf 23, as can be seen in Fig. 4, is a single sheet, and does not include the claimed pair of sheet segments separated by a fold. The beads 59 cited by the Examiner as representing a fold in the end leaf 23 having nothing to do with the end leaf, with the bead appearing to be the widened spine region of the hard case 46. In view of the foregoing, it is submitted that amended Claim 12 is patentable over Abildgaard et al, either alone or in combination with the other cited art.

Claim 13 was rejected for being obvious under §103(a) in view of Abildgaard et al. Claim 13 has been amended to further distinguish the claimed invention over the prior art. Claim 13 is directed to a binding apparatus which is capable of being used in a conventional "perfect bind" binding machine which, as previously noted, functions to apply hot melt adhesive to the edge of a stack being bound and to then apply a flexible cover to the stack by wrapping the cover around the stack edge. The adhesive functions both to the bind the sheets of the stack and to secure the wrapped cover to the stack. The claimed binding apparatus includes, as amended, a "flexible elongated spine member having openings that permit ... molten hot melt adhesive to flow through the spine member" and a "rectangular shaped release sheet attached to the spine member, with the spine member extending along a center of the release sheet". Amended Claim 13 goes on the recite further limitation on the dimensions of the release sheet relative to the sheets of the stack to be bound.

In rejecting Claim 13, reference was made in the Office Action to "an elongated spine member having openings (22), covered by a release sheet (37), (See figures 10 – 14)". This language is not understood since openings 22 are

formed in the individual sheets 21 to be bound. It is apparent from Claim 13 that the "apparatus for use in binding a stack of sheets", including an "elongated spine member", is separate from the stack of sheets to be bound. Given this claim language, it is inappropriate to somehow interpret the sheets themselves to be the "elongated spine member". Claim 13 has been amended to further recite limitations on the dimensions of the "release sheet" with respect to the sheets of the stack to be bound and still further amended to recite that the "elongated spine member" extends "over the [rectangular shaped] release sheet and along a center of the release sheet". This arrangement is nowhere disclosed or suggested in Abildgaard et al.

With respect to the statement in the Office Action that it would be "obvious to one of ordinary skill in the art to construct the holes as disclosed for the purpose of permitting molten hot melt adhesive to flow through them" begs the question as to the motivation of one of ordinary skill in the art to do such a thing. The holes in the sheets are present to receive the plastic studs for binding. If hot melt adhesives are to be used for binding instead of studs, the holes would not be present. This is clear from the Abildgaard et al reference itself where embodiments using hot melt adhesives as shown in Figs. 8 and 8A/B have no openings.

For the above-noted reasons, it is submitted that Claim 13 is patentable over Abildgaard et al.

Applicants have further presented new Claims 14 – 17 which are further believed to be patentable. By way of example, Claim 14 is directed to a method of binding a stack of sheets which includes a pair of end leaf, with each end leaf including first and second sheet segment separated by a fold. An elongated spine member is secured to the edge of the stack by way of hot melt adhesive, typically using a "perfect bind" binding machine. The method includes attaching the end leafs using pressure sensitive adhesive such that the folds of the end leafs are "disposed intermediate ... the elongated spine member and the stack of sheets". This feature is not disclosed or suggested in the cited prior art. Claims 15 and 16 both depend directly from Claim 14 and are thus also patentable.

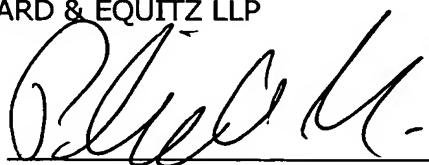
New Claim 17 is directed to a method of binding a stack of sheets using, among other things, a "binding apparatus" which includes an "elongated spine member having a plurality of openings disposed" and an associated "release sheet". The method includes "applying molten hot melt adhesive to an edge of the stack" and "wrapping the binding apparatus around the stack ... with at least a portion of the molten hot melt adhesive passing the openings in the spine member". This can be carried out using a conventional "perfect bind" binding machine. After the wrapping, the method includes "separating the release sheet from the spine member". This novel method of Claim 17 is also neither disclosed nor suggested by the cited prior art.

Thus, in conclusion, all Claims 1 – 17 are believed to be in condition for allowance and an early allowance is requested.

Respectfully submitted,

GIRARD & EQUITZ LLP

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By: 

Philip A. Girard

Reg. No. 28,848

Attorneys for Applicant(s)

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